PROGRAM EXECUTIVE OFFICE SOLDIER

NON-MANEUVERABLE CANOPY (T-11) PERSONNEL PARACHUTE SYSTEM

Project Manager Soldier Protection and Individual Equipment

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The Non-Maneuverable Canopy (T-11) Personnel Parachute System, the first wholesale modernization of the tactical parachute system since the 1950s, provides the airborne Soldier with a more stable, safer rate of descent that reduces landing injuries and allows the wearer to carry a heavier load.

Specifications

- Component materials:
  - **Main and reserve canopies:** low-porosity ripstop nylon, with Teflon®-coated suspension lines
  - **Main container:** Cordura™
  - **Harness:** Type 7 nylon webbing
- **System weight:** 52.7 pounds; main parachute, 38 pounds; reserve assembly, 14.7 pounds
- **Size:** Main canopy, 30.6 feet inflated diameter at the hem; reserve canopy, 24 feet nominal diameter
- **Color:** Foliage Green 504

Program Status

Plans are underway to complete fielding to the Ranger Regiment and to begin fielding to the 82nd Airborne Division.

The T-11 features a completely redesigned main and reserve parachute and an integrated harness system. It is suitable for a wide range of Soldier sizes, from the 5th percentile to the 95th percentile. The main canopy is a modified version of a cruciform, or cross, platform. The canopy's inflated diameter is 14 percent greater and its surface area 28 percent greater than in the previous generation parachute, the T-10D assembly. The T-11 main canopy utilizes a unique deployment sequence to reduce the opening shock and canopy oscillation. The T-11 is designed to have an average rate of descent of 19 feet per second for the 95th percentile Soldier, compared with 24 feet per second with the T-10D. This reduction will result in significantly lower rates of landing injury for jumpers.

The reserve canopy is a proven derivative of the British Low Level Parachute's aero-conical design, with apex scoop pockets at the top of the reserve canopy and skirt assist lines at the system's hem to promote fast opening of the reserve system during low-speed malfunctions. Unlike the current reserve parachute system, the T-11R reserve uses an omni-directional, center-pull deployment system. The T-11 harness is designed to displace opening shock forces of the reserve parachute equally along the long axis of the jumper's body.

"What's nice about it is its larger canopy. So that gives us a slower rate of descent, which is nice, especially with the amount of weight our troopers are carrying nowadays. That means fewer injuries on the drop zone and more troopers able to pick up at the end of the mission "

– LTC Keith Pellegrini

Maneuverable Canopy 6 (MC-6) Personnel Parachute System

The Maneuverable Canopy 6 (MC-6) Personnel Parachute System enables the parachuting Soldier to steer toward a specific impact point in the drop zone.

The MC-6 is a new tactical, static line-deployed, steerable personnel parachute system that replaces the legacy MC-1 series parachute assembly, associated harness, and reserve. The MC-6 has a safer rate of descent, lower opening shock, reduced canopy damage, better turn ratio, and a better glide ratio than the MC1-1C. The system was designed specifically to operate at higher altitudes with heavier weights. These improvements result in better maneuverability, greater canopy control, and reduced jumper injury.

Military Free Fall (MFF) Parachute System

The Military Free Fall (MFF) Advanced Ram Air Parachute System (ARAPS) provides a multi-mission, high-altitude parachute delivery system that allows personnel to exit at altitudes between 3,500 feet and 35,000 feet.

The ARAPS' three accessory systems are at different stages of the acquisition process:

The **Electronic Automatic Activation Device (EAAD)**, used with current and next-generation parachute systems, replaces the Automatic Ripcord Release. EAAD provides a more efficient method of activation if the parachutist is unable to deploy the parachute at the appropriate altitude. The EAAD activates and cuts the reserve parachute closing loops if the jumper is falling at 78 mph or faster at the minimum deployment altitude.

The **Navigation Aid (NAVAID)** provides in-flight navigation and mission planning capability, allowing parachutists under canopy to locate themselves and the intended drop zone easily, even at night. The system uses a GPS that integrates with the Mission Planner of the Joint Precision Airdrop System, ensuring more accurate canopy flight and drop zone landings.

The **Parachutist Oxygen Mask (POM)** will provide supplemental oxygen at 13,000 feet and higher and will not interfere with the parachutist's vision or range of motion. The over-the-shoulder routing of the oxygen hose lessens the chance of interfering with the jumper's activation of the main canopy.